

Patent Application No. 10/046,295

Inventors: Lyons, et al.

NC 83,068

Listing of Claims:

Claims 1 - 10 (cancelled)

Claim 11 (previously presented) A process for preparing a metal oxide for a battery cathode with increased capacity, said process comprising:

applying a mixture of O₂ and H₂O gas to a sufficient amount of a metal oxide sample;
heating said metal oxide sample; and
cooling said metal oxide sample.

Claims 12-16 (canceled)

Claim 17 (currently amended): The process as in claim 11, further comprising the step of:
maintaining said heating step at a temperature of from about 300 to about 600 °C.

Claim 18 (currently amended): The process as in claim 17, wherein said heating step is maintained from about 6 to about 72 hours.

Claim 19 (previously presented): The process as in claim 11, wherein said gas is applied to said metal oxide sample at a linear flow rate of at least about 50 ccm.

Claim 20 (currently amended): The process as in claim 11, wherein said heating step is from about 2 to about 20 °C/min up to about 460 °C.

Patent Application No. 10/046,295

Inventors: Lyons, et al.

NC 83,068

Claim 21 (previously presented): The process as in claim 20, further comprising the step of:

maintaining said temperature of about 460 °C for 24 hours.

Claim 22 (previously presented): The process as in claim 11, wherein said cooling is from about 2 to about 20 °C/min until ambient air temperature is achieved.

Claim 23 (previously presented): The process as in claim 11, wherein said metal oxide sample is V₂O₅.

Claim 24 (previously presented): The process as in claim 11, wherein said metal oxide sample comprises a surface area of about 1- 10 square meters.

Claim 25 (new) A process for preparing a metal oxide for a battery cathode with increased capacity, said process comprising:

applying a mixture of O₂ and H₂O gas to a sufficient amount of a V₂O₅ metal oxide sample at a linear flow rate of about 50 – 350 ccm;

heating said metal oxide sample at a temperature of from about 300 to about 600 °C for a time period of from about 6 to about 72 hours; and
cooling said metal oxide sample.